PTO/SB/08A (10/01) (modified)
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Substitute for form 1449A/PTO

1

Sheet

NOV 2 2 2004

INFORMATION DISCLOSURE STATEMENT BY APPERENT

(use as many sheets as necessary)

of

7

Application Number 10/796,514

Filing Date March 9, 2004

First Named Inventor John P. Snyder

Art Unit 2711

Examiner Name Not Yet Known

Attorney Docket Number 14467.05

U.S. PATENT DOCUMENTS

Examiner Initials	Cite No.	DOCUMENT NUMBER Number - Kind Code (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
SK		US- 4,053,924	10-11-1977	Roman et al.	
SK		US- 4,300,152	11-10-1981	Lepselter	
SIL	 	US- 4,485,550	12-4-1984	Koeneke et al.	
SK	1	US- RE32,613	2-23-1988	Lepselter et al.	
2K		US- 4,780,429	10-25-1988	Roche et al.	
SK		US- 4,942,441	7-17-1990	Konishi et al.	
	1.	US- 5,079,182	1-7-1992	Ilderem et al.	
SK SK		US- 5,323,053	6-21-1994	Luryi et al.	
SK		US- 5,338,698	8-16-1994	Subbanna	
JL		US- 5,444,302	8-22-1995	Nakajima et al.	
SIL		US- 5,663,584	9-2-1997	Welch	
	1	US- 5,760,449	6-2-1998	Welch	
SK	1	US- 5,767,557	6-16-1998	Kizilyalli	
dL		US- 5,801,398	9-1-1998	Hebiguchi	

FOREIGN PATENT DOCUMENTS

*Examiner Cita		FOREIG	N PATENT DOCUMENT					
	Country	Number - Kind Code (if known)	Publication Date	Name of Botoston or	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	TRANSL	ATION	
Initial No.			Code:	MM-DD-YYYY		Name of Patentee or Applicant of Cited Document	YES	NO
SIC		EP	0 603 102 A2	6-22-1994			☒	
SIC		WO	01 45157	06-21-2001	Spinnaker Semiconductor, Inc.			
SK		JP	06097109	04-08-1994	Fujitsu Ltd			X
SK		JP	2000124329	04-28-2000	Toshiba Corp.			囡
		Ţ,						
EXAMI	NER	SIGNATU	RE 19/L	1	DATE CONSIDERED	5/10/05		

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

PTO/SB/08A (10/01) (modified) U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE Substitute for form 1449A/PTO 10/796,514 **Application Number** Filing Date March 9, 2004 INFORMATION DISCLOSURE John P. Snyder First Named Inventor STATEMENT BY APPLICANT **Art Unit** 2811 (use as many sheets as necessary) **Not Yet Known Examiner Name** 2 of 7 **Attorney Docket Number** 14467.05 Sheet **U.S. PATENT DOCUMENTS** Pages, Columns, Lines, DOCUMENT NUMBER **Publication Date** Name of Patentee or Where Relevant Passages or ciclina **Applicant of Cited Document** MM-DD-YYYY Relevant Figures Appear Number - Kind Code (if known) 5,883,010 3-16-1999 Merrill et al. US-3-14-2000 6,037,605 Yoshimura SK US-6,160,282 12-12-2000 Merrill US-54 Welch 7-31-2001 6,268,636 US-SC 10-16-2001 Snyder 6,303,479 US-11-27-2001 Yamazaki et al. 6,323,528 US-3-5-2002 Kimura 6,353,251 ŚĽ US-Yu 7-2-2002 6,413,829 US-6,420,742 7-16-2002 Ahn et al. 54 US-11-26-2002 Chooi et al. 6,486,080 US-SL 12-17-2002 6.495.882 Snyder SL US-1-21-2003 Zhang et al. 6,509,609 SK US-4-29-2003 Krivokapic et al. 6,555,879 US-2001/0024847 A1 9-27-2001 Snyder US-2002/0030231 Okawa et al. 3-14-2002 SX US-5,361,225 11-01-1994 Takanori US-8-13-1991 Yoshinori et al. 5,040,034 US-4-23-1985 Cricchi 4,513,309 US-Tove et al. 11-19-1985 4,554,569 US-5,250,834 10-05-1993 Nowak US-

EXAMINER SIGNATURE DATE CONSIDERED (

9-9-1997

10-2000

5,665,993

6,130,750

US-

US-

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Keller et al.

Ausschnitt et al.

Substitute for form 1449A/PTO							Appli	ication Number	r	10/796,514		
INIE	INFORMATION DISCLOSURE		Filing	Date		March 9, 2004						
	-						First	Named Invento	or	John P. Snyder		
STATEMENT BY APPLICANT (use as many sheets as necessary)							Art U	nit		2811		
	(us	90 0	is many	SHEEKS	as necessar	y)	Exan	niner Name		Not Yet Known		
Sheet		3		of	7		Attor	ney Docket Nu	mber	14467.05		
			ОТ	HER I	DOCUMEN	ITS - NON	I-PAT	ENT LITERA	TURE	DOCUMENTS		
Examiner Initials	Cita No.				(book, magazine	, journal, serial	i, sympo:	RS), title of the articlesium, catalog, etc.), nd/or country where	date, pag		TRANSI	NO
Sk			LEPSEL Barrier (TER, M Contacts	I.P., SZE, S.M. s for Source an	SB-IGFET: d Drain. Pro	An Insi ceeding	ulated Gate Field is of the IEEE, Au	Effect Ti gust 196	ransistor Using Schottky 88; pp. 1400-1402.		
SK			LEPSEL Schottky	TER, M y Barrier	I.P., MACRAE, rs. Proceeding	A.U., MACD s of the IEEE	ONALD E, May 1), R.W. <u>SB-IGFE</u> 969; pp. 812-813	Γ, ΙΙ: An ·	Ion Implanted IGFET Using		
SK			KISAKI,	Hitoshi.	Tunnel Trans	sistor. Procee	edings o	of the IEEE, July 1	973; pp	. 1053-1054.		
SK	ŀ			KOENEKE, C.J., SZE, S.M., LEVIN, R.M., KINSBRON, E. Schottky MOSFET for VLSI. IEDM, 1981; pp. 367-370.								
SK			SUGINO PMOS.	D, M., AI IEDM,	KERS, L.A., RE 1982; pp. 462-	EBESCHINI, 465.	M.E. <u>C</u>	MOS Latch-Up El	iminatio	n Using Schottky Barrier		
SK				·		_		ottky MOSFET. I		,		
SK			Device :	Letters,	EDL-5, No. 4, 7	April 1984; pj	p. 108-1	11.		and Drain. IEEE Electron		
SŁ					Y.H., KIM, C.P V, 1984; pp. 60		Channe	I MOSFET Structu	ure with	Schottky Clamped Source		
K			Electror	n Device	s, <i>ED-32</i> , No. 3	2, February 1	1985; pp	o. 194-202.		ss. IEEE Transactions on		
SK			Comple	mentary		Concept Using	g Silicor			, T., MAGNUSSON, U. <u>I.</u> IEEE Electron Device		
SK			M., MAS	SSZI, F.	, NYANDER, J	. Silicon IC 1	<u>Fechnol</u>		ementor	DERBARG, A., ROSLING, y MESFETs. Solid State		
EXAMI	NER	SIC	SNATUR	E /		-		DATE CONSID	ERED	5/10/05		
										ce with MPEP 609. Draw mmunication to applicant.	line th	rough

Substitute for form 1449A/PTO					Applica	ation Number	10/796,514				
INFORMATION DISCLOSURE			Filing I	Date	March 9, 2004						
STATEMENT BY APPLICANT					First N	amed Inventor	John P. Snyder				
(use as many sheets as necessary)						it	2811				
	lus	e as many	3116613	as necessary)	Examir	ner Name	Not Yet Known				
Sheet		4	of	7	Attorne	ey Docket Number	14467.05				
	OTHER DOCUMENTS - NON-PATENT LITERATURE DOCUMENTS										
Examiner	Cite			ame of the author (in CAPITAL book, magazine, journal, serial				TRANSI	LATION		
tnitiats	No.			number(s), publish	ner, city and	i/or country where published	ed	YES	NO		
SK				, M. <u>A Novel Process for H</u> No. 5, May 1989; pp. 1456-		mance Schottky Barrie	r PMOS. J. Electrochem				
SK				HADRI, V.S. A Survey of the less. Solid State Electronics							
5/2			HATTORI, Reiji, NAKAE, Akihiro, SHIRAFUJI, Junji. A New Type of Tunnel-Effect Transistor Employing Internal Field Emission of Schottky Barrier Junction. Japan J. Appl. Phys., Vol. 31, 1992; pp. L1467-L1469.								
SK			HATTORI, Reiji, SHIRAFUJI, Junji. <u>Numerical Simulation of Tunnel Effect Transistors.</u> <i>Japan J. Appl. Phys.</i> , Vol. 33, 1994; pp. 612-618.								
SV				WANG, C., LYDING, J.W., on Si. SSDM 1994, Augus			meter Scale MOSFETs and				
SK				WANG, C., CARNEY, P.S. Letters, Vol. 65, No. 5, 1 A			sed on Quantum Tunneling.				
SK		KIMUR Device	A, Mitsut <i>Letter</i> s,	eru, MATSUDATE, Tadash <i>EDL-15</i> , No. 10, October 19	ni. <u>A New</u> 994, pp. 41	Type of Schottky Tunne 12-414.	el Transistor, IEEE Electron				
SK		Field E	mission [*]	<u>Fransistor</u> . Applied Physics	s Letters, V	Vol. 67, No. 10, 4 Septe					
54		WOLF, Press,	Stanley. Sunset B	Silicon Processing for the each, CA, 1995; pp. 523-52	VLSI Era. 28.	. Volume 3: The Subm	icron MOSFET, Lattice				
SK		Contact 361-36	ts and a 3.	ISMAIL, K., CHU, J.O., CH Self-Aligned Low-Resistand	ce T-gate.	Microelectronics Engil	neering, Vol. 35, 1997; pp.				
SK				ka, ASANO, Tanemasa. Re Source/Drain Contacts. Jap							
EXAMI	NER :	SIGNATUR	RE	13/6	C	DATE CONSIDERED	5/10/05				
				ce Considered, whether one not considered. Include			e with MPEP 609. Draw nmunication to applicant.	line th	rough		

Substitute for form 1449A/PTO						Application Number	10/796,514					
INIC) R	A TIC	אור	ISCLOSURE	Filing Date	March 9, 2004					
					APPLICANT	First Named Inventor	John P. Snyder					
31/				_	as necessary)	Art Unit	2811					
	100		is many	3/10013	as necessary)	Examiner Name	Not Yet Known					
Sheet	_	5		of	7	Attorney Docket Number	14467.05					
OTHER DOCUMENTS - NON-PATENT LITERATURE DOCUMENTS												
Examiner Initiats	Cite No.		I		book, magazine, journal, serial	LETTERS), title of the article (when a , symposium, catalog, etc.), date, pag er, city and/or country where publishe	ge(s), volume-issue	TRANSI	ATION ON			
SK.					DER, John P., TUCKER, J. Research Conference Diges	R. Sub-50nm PtSi Schottky Sout, June 1998, pp. 72-73.	rce/Drain p-MOSFETs. 56 th					
SK			Epitaxial Transist	CoSi2/	Si(100) for Ultrashort Chani plied Physics Letters, Vol. 7	M., KAPPIUS, L., MANTL, S. <u>Na</u> nel Schottky Barrier Metal-Oxide- 4, No. 3, 18 January 1999; pp. 45	Semiconductor Field Effect 54-456.					
5K			Semicor	WANG, C., SNYDER, John P., TUCKER, J.R. <u>Sub-40nm PtSi Schottky Source-Drain Metal-Oxide-Semiconductor Field-Effect-Transistors</u> . <i>Applied Physics Letters</i> , Vol. 74, No. 8, 22 February 1999; pp. 1174-1176.								
514			SNYDER, John P., HOLMS, C.R., NISHI, Yoshio. <u>Analysis of the Potential Distribution in the Channel Region of a Platinum Silicided Source/Drain Metal Oxide Semiconductor Field Effect Transistor.</u> <i>Applied Physics Letters</i> , Vol. 74, No. 22, 31 May 1999; pp. 3407-3409.									
SK			SAITOH Schottky	I, W., YA Y Source	AMAGAMI, S., ITOH, A., AS e/Drain. 57 th Annual Device	ADA, M. 35nm Metal Gate SOI- Research Conference Digest, Ju	p-MOSFETs with PtSi une 1999; pp. 30-31.					
SK					Schottky Barrier MOSFETs op. 97-100.	for Silicon Nano-electronics. IEE	E Frontiers in Electronics,					
SK			LAPLAN 1999, pa		ilip A. (Editer-in-Chief). <u>Cor</u>	nprehensive Dictionary of Electric	cal Engineering. IEEE Press,					
SK					ard S. and KAMINS, Theodo Edition, 1977, 1986, pp. 448	ore I. <u>Device Electronics for Integ</u> , 505-511.	rated Circuit. John Wiley &					
5K			PIERRE 1983; pr			Devices, vol. I Semiconductor Fu	ndamentals, Addison-Wesly,					
SK					rold W. <u>Volume II: The PN .</u> y, 1983; pp. 8-10.	<u>Junction Diode,</u> Modular Series C	On Solid State Devices.					
sk			On-line	Encyclo	pedia Britannica, 2001, defi	nition of "rare-earth element.", da	ite not established; 2 pages.					
EXAMI	NER	SI	GNATUR	E	A6	DATE CONSIDERED	5/10/05					
						or not citation is in conformance		line th	rough			

Substitute for form 1449A/PTO				Appl	ication Number		10/796,514					
INFORMATION DISCLOSURE				Filin	g Date		March 9, 2004					
						First	Named Inventor		John P. Snyder			
(use as many sheets as necessary)						Art L	Jnit		2811			
	(03	ва	S many	3116613	as necessary)	Exam	niner Name		Not Yet Known			
Sheet		6		of	7	Atto	rney Docket Numb	er	14467.05			
	Ī	-	ОТІ	HER [OCUMENTS - NON	I-PAT	ENT LITERATU	JRE	DOCUMENTS			
*Examiner	Cite		10	nclude na	ame of the author (in CAPITAL	LETTE	RS), title of the article (w	hen a	ppropriate), title of the	TRANSLATION		
Initiats	No.	ı		item (i	book, magazine, journal, serial, number(s), publishe	, sympo er, city a	sium, catalog, etc.), date and/or country where put	e, page olished	e(s), volume-issue	YES	NO	
c(a		1	SZE, S.N	1. Phys	ics of Semiconductor Device	æs, Joh	n Wiley & Sons, Sec	ond E	dition, 1981; pp. 293-294.		_	
56		ı										
					LUEBBEN, H., REED, M.A.							
SK					d scaling of PtSi Schottky b Vol. 28, No. 5/6; pp. 501-50		WOSFETS, 2000 Aca	demic	: Press, Supenattices and			
					Silicon Processing for the	VLSI E	ra, Vol. 3: The Submi	cron N	MOSFET. Lattice Press,			
SK			1995; pp	. 183-18	3 7.							
<i></i>			Web page "provided by Laurie Calvet", "Device Physics of the SBMOSFET",									
JK.	×	ı	http://www.eng.yale.edu/reedlab/research/semicond.html, date not established; 7 pages.									
•					and RAVAIOLI, U. Simulati							
SK			Injection/ 1241-124		Carol Technique. IEEE Tra	nsactio	ons on Electron Device	e, Vol	. 47, No. 6, June 2000; pp.			
					YAN, L., LEI, S., JIAPING,							
SK.					nm n-Channel Schottky Bar pril 2002; pp. 200-203.	rier Tu	nneling Transistors.	Chine	se Journal of Electronics,			
					ISMAIL, K., CHU, J.O., CH echnology with self-aligned]]	
SK					15(6), Nov/Dec 1997, pp. 2				notarios y gatos.			
/1					, XUAN, P., SUBRAMANIA				, C., ANDERSON, E. A 20]		
SK					2000, pp. 445-452.	viti Sinc	due source/drain. Su	penai	lices and Microstructures,			
					et al., <u>Bulk Silicon Technolo</u> 27, 1989; pps. 565-566.	gy For	Complementary MES	FETs	. Electronics Letters, Vol.)		
SK		ı	25, NO. 8	, Apili 2	:7, 1969, pps. 505-500.							
10		1	Random	House	College Dictionary, 1980, R	andom	House, Inc., Revised	Ed.,	pages 17 and 1066.			
SK		╢	Internation	nal Ter	chnology Roadmap for Sem	icond	ctors 1000 LIS Conve	iaht 1	000 by Semiconductor			
5K			Industry	Associa	tion, Front End Processes	section.	, page 107.	igiil I	ass by Semiconductor			
EXAMI	NER	SIG	NATURI	E	03//5		DATE CONSIDERI	ED	5/10/08			
*EXAM citation	NER	: la	nitial if r	eferenc	ce considered, whether or d not considered. Include	r not c	citation is in conform	nance	with MPEP 609. Draw I munication to applicant.	ine thi	rough	

/01)	(m	odif	ied)	+
•	,	٠		,	_

Substitute for form 1449A/PTO							Application Number	10/796,514				
INIE	·) R	7 A T1/	ONI F	DISCLOSUR		Filing Date	March 9, 2004				
	-						First Named Inventor John P. Snyder					
31/	STATEMENT BY APPLICANT						Art Unit	2811	2811			
	(use as many sheets as necessary)						Examiner Name	Not Yet Known				
Sheet		7		of	7		Attorney Docket Number	14467.05				
OTHER DOCUMENTS - NON-PATENT LITERATURE DOCUMENTS												
"Examiner	Cite						LETTERS), title of the article (when		TRANSLATION			
tritials	No,		number(s), publis				I, symposium, catalog, etc.), date, pager, city and/or country where published		YES	NO		
SK			S.M. Sz	e, <u>Physi</u>	cs of Semiconductor	Device	<u>es,</u> 1981, John Wiley & Sons., Se	cond Edition, pp. 451-453.				
SK			Tu, K.N. Physics	Thomp Letters,	son, R.D., Tsaur, B.Y , vol. 38, No. 8, Apr. 1	'. <u>Low</u> 981; p	Schottky Barrier of Rare-Earth Sipp. 626-628.	licide on n-Si, Applied				
5K			Unewisse, M.H., Storey, J.W. V. <u>Electrical and Infared Investigation of Erbium Silicide</u> , <i>J. Appl. Phys.</i> , vol. 72, No. 6., Sep. 1992; pp. 2367-2371.									
SK			Geppert, Linda. The 100-Million Transistor IC. IEEE Spectrum, Jul. 1999; pp. 23-24.									
5 K			Taur, Yu	an. The	Incredible Shrinking	Trans	istor. IEEE Spectrum, Jul. 1999;	pp. 25-29.				
			SNATUR		36		DATE CONSIDERED	5/10/05				
							or not citation is in conformance copy of this form with next cor		line th	rough		